

PATENT COOPERATION TREATY

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Assistant Commissioner for Patents
 United States Patent and Trademark
 Office
 Box PCT
 Washington, D.C. 20231
 ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

Date of mailing (day/month/year)
 17 April 2000 (17.04.00)

International application No.
 PCT/US99/16176

Applicant's or agent's file reference
 Hawtof 8-1-1

International filing date (day/month/year)
 16 July 1999 (16.07.99)

Priority date (day/month/year)
 07 August 1998 (07.08.98)

Applicant

HAWTOF, Daniel, W. et al

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:

27 January 2000 (27.01.00)

☐ in a notice effecting later election filed with the International Bureau on:

2. The election ☒ was

☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO
 34, chemin des Colombettes
 1211 Geneva 20, Switzerland

Facsimile No.: (41-22) 740.14.35

Authorized officer

R. Raissi

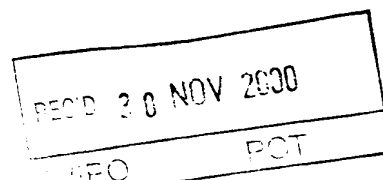
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PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)



Applicant's or agent's file reference HAWTOF 8-1-1	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA 416)	
International application No. PCT/US99/16176	International filing date (day/month/year) 16 JULY 1999	Priority date (day/month/year) 07 AUGUST 1998
International Patent Classification (IPC) or national classification and IPC IPC(7): C03B 37/027, 37/018 and US Cl.: 65/377, 379, 413, 484, 529		
Applicant CORNING INCORPORATED		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets.

☒ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority. (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 2 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of report with regard to novelty, inventive step or industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☒ Certain observations on the international application

Date of submission of the demand 27 JANUARY 2000	Date of completion of this report 12 OCTOBER 2000
Name and mailing address of the IPEA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231	Authorized officer JOHN HOFFMANN
Facsimile No. (703) 305-3230	Telephone No. (703) 308-0651

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US99/16176

1. Basis of the report

1. With regard to the elements of the international application:*

- ☐ the international application as originally filed
- ☒ the description:
pages 1-17, as originally filed
pages NONE, filed with the demand
pages NONE, filed with the letter of
- ☒ the claims:
pages 19, 21, as originally filed
pages NONE, as amended (together with any statement) under Article 19
pages NONE, filed with the demand
pages 18, 20, filed with the letter of 28 July 2000
- ☒ the drawings:
pages 1-2, as originally filed
pages NONE, filed with the demand
pages NONE, filed with the letter of
- ☒ the sequence listing part of the description:
pages NONE, as originally filed
pages NONE, filed with the demand
pages NONE, filed with the letter of

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in printed form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☒ The amendments have resulted in the cancellation of:

- ☒ the description, pages NONE
- ☒ the claims, Nos. NONE
- ☒ the drawings, sheets/fig NONE

5. ☒ This report has been drawn as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

**Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US99 16176

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**1. statement**

Novelty (N)	Claims	<u>9, 12-15, 22-23</u>	YES
	Claims	<u>1-8, 11, 16-21, 24-25</u>	NO
Inventive Step (IS)	Claims	<u>10</u>	YES
	Claims	<u>1-9, 11-25</u>	NO
Industrial Applicability (IA)	Claims	<u>1-25</u>	YES
	Claims	<u>NONE</u>	NO

2. citations and explanations (Rule 70.7)

Claims 1-8, 11, 16-21 and 24-25 lack novelty under PCT Article 33(2) as being anticipated by Blankenship 4230744.

Referring to the Blankenship figure, GeCl₄ is the evaporative liquid, SiCl₄ is the liquid reactant - it is clear that someone selected that these two liquids be delivered to the burner. Thus they are selectively delivered. It is clear that the step of reacting the liquid reactant is met. As to the transitioning between the two liquids: the claims are confusing as to what they require. The claim requires the two liquids are delivered to the zone, so there is no basis for anything being between them, nor is there any disclosure of anything transitioning between them. Thus claim 1, step b) is interpreted as transitioning a member from between the two members of the group of two liquids. It is clear that both of these liquids transition from liquid to gas.

As to the newly added limitations to claims 1 and 20, such beginning components are conventional reactants. It would have been obvious for one to substitute one known reactant for another with a reasonable expectation of success.

Claim 2 is clearly met.

Claims 3-5; see col. 6, lines 31-47. It is also noted that the flow of the liquid stops once it reaches the nebulizer because it stops being a flowing liquid.

Claim 6 is clearly met.

Claim 7 is met because it is as effective as the instant invention is in that is effective in preventing certain types of deposits - it is not effective in preventing all types of deposits. For example if someone were to deposit sand in the conduits, the instant invention would not stop that.

Claims 8, 11, 16-21 and 24-25 are clearly met.

Claims 9, 12-15 and 22-23 lack an inventive step under PCT Article 33(3) as being obvious over BLANKENSHIP.

As to claim 9, it would have been obvious to use a oxygen containing non-halide as the dopant supplying evaporative liquid.

As to claims 12-15 and 22-23, it would have been obvious to replace the discharged liquids with a fluid that would not react (Continued on Supplemental Sheet.)

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT US99 16176

VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

Claims 1-20 are objected to as lacking clarity under PCT Rule 66.2(a)(v) because practice of the claimed invention is not adequately described in writing, as required under PCT Rule 5.1(a)(iii), for the reasons set forth in the immediately preceding paragraph.

There is no support for the new "alkoxide" limitation or the nonatomized limitation. Whereas there is support for at least one specific alkoxide, there is no support for the newly claimed genus "alkoxide". As to the nonatomized limitation, claim 6 clearly requires that the liquid be atomized - thus it is clear that there is no support for the new limitation.

Claim 20: there is no support for the new genres claimed. The specification as originally filed fails to suggest to the routineer that the inventor had possession of the genres now claimed.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No

PCT/US99 16176

Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: Boxes I - VIII

Sheet 10

I. BASIS OF REPORT:

5. (Some) amendments are considered to go beyond the disclosure as filed:
NONE

V. 2. REASONED STATEMENTS - CITATIONS AND EXPLANATIONS (Continued):

with the liquid in 18, 20 and 22 - otherwise a negative pressure would develop and prevent additional removal of the liquids.
The specific gases claimed are well known inert inexpensive fluids.

Claim 10 the criteria set out in PCT Article 33(2)-(4), because the prior art does not teach or fairly suggest any of the specifically claimed liquids.

----- NEW CITATIONS -----

NONE

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US99/16176

A. CLASSIFICATION OF SUBJECT MATTER

IPC(6) : C03B 37/027, 37/018

US CL : 65/377, 379, 413, 484, 529

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 65/377, 379, 413, 484, 529

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
aps**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 4,230,744 A (BLANKENSHIP) 28 October 1980, see entire document, especially the figure.	1-8, 11, 16-21, 24-25 ----- 9-10, 12-15, 22- 23

☐ Further documents are listed in the continuation of Box C.
 ☐ See patent family annex.

* Special categories of cited documents:	*T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
A document defining the general state of the art which is not considered to be of particular relevance	*X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
E earlier document published on or after the international filing date	*Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
L document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	*A* document member of the same patent family
O document referring to an oral disclosure, use, exhibition or other means	
P document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

08 SEPTEMBER 1999

Date of mailing of the international search report

19 OCT 1999

 Name and mailing address of the ISA/US
 Commissioner of Patents and Trademarks
 Box PCT
 Washington, D.C. 20231

Facsimile No. (703) 305-3230

Authorized officer

JOHN HOFFMANN

Telephone No. (703) 308-0651

09/762274

The PTO did not receive the following
listed item(s)

NO POST CARD

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US99/16176

A. CLASSIFICATION OF SUBJECT MATTER

IPC(6) : C03B 37/027, 37/018

US CL : 65/377, 379, 413, 484, 529

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 65/377, 379, 413, 484, 529

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

aps

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 4,230,744 A (BLANKENSHIP) 28 October 1980, see entire document, especially the figure.	1-8, 11, 16-21, 24-25 ----- 9-10, 12-15, 22- 23

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

* Special categories of cited documents:	*T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
A document defining the general state of the art which is not considered to be of particular relevance	*X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
E earlier document published on or after the international filing date	*Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
L document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	*G* document member of the same patent family
O document referring to an oral disclosure, use, exhibition or other means	
P document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

08 SEPTEMBER 1999

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19 OCT 1999

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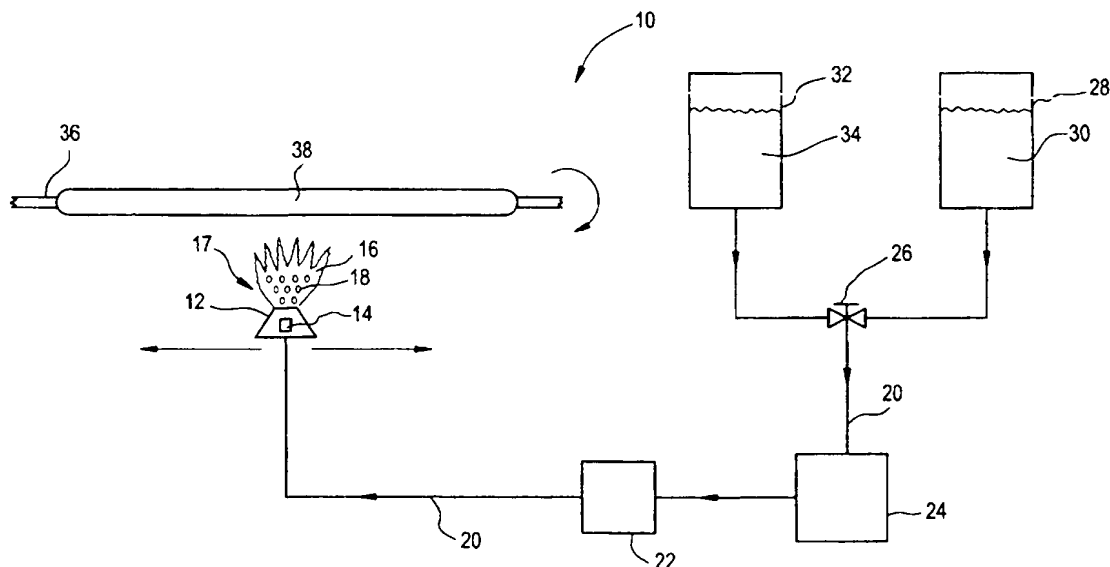
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INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : C03B 37/027, 37/018	A1	(11) International Publication Number: WO 00/07950 (43) International Publication Date: 17 February 2000 (17.02.00)
(21) International Application Number: PCT/US99/16176 (22) International Filing Date: 16 July 1999 (16.07.99) (30) Priority Data: 60/095,735 7 August 1998 (07.08.98) US (71) Applicant (for all designated States except US): CORNING INCORPORATED [US/US]; 1 Riverfront Plaza, Corning, NY 14831 (US). (72) Inventors; and (75) Inventors/Applicants (for US only): HAWTOF, Daniel, W. [US/US]; 40 Fox Lane Ext., Painted Post, NY 14870 (US). STONE, John, III [US/US]; 9199 Smith Road, Painted Post, NY 14870 (US). WHALEN, Joseph, M. [US/US]; 2493 Spencer Hill Road, Corning, NY 14830 (US). (74) Agent: BERDAN, David, L.; Patent Dept., SP TI 3-1, Corning Incorporated, Corning, NY 14831 (US).		(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published <i>With international search report.</i>

(54) Title: CREATING SILICA SOOT WITH A PLUG-FREE SYSTEM**(57) Abstract**

A first liquid (30) in a container (28) goes to a burner (14). Then a second liquid (34) in a second container (32) goes to the burner (14). The burner then makes soot which is deposited as silica (38) on a substrate (36).